

WHAT IS CLAIMED IS:

5

1. A liquid drop jet head, comprising:
a nozzle jetting a liquid drop;
a liquid room connected to the nozzle;
a common liquid room connected to the liquid

10 room;

a supply opening part supplying the liquid
to the common liquid room; and

a pressure generating part that generates a
pressure pressurizing the liquid provided in the
15 liquid room,

wherein the common liquid room has a
configuration in which a width of the common liquid
room on a plane level is narrower as a point of the
width is more remote from the supply opening part.

20

2. The liquid drop jet head as claimed in
25 claim 1, wherein the width of the common liquid room

on the plane level is narrower substantially
consecutively as the point of the width is more
remote from the supply opening part.

5

3. The liquid drop jet head as claimed in
claim 1, wherein the width of the common liquid room
10 on the plane level is narrower substantially
gradually as the point of the width is more remote
from the supply opening part.

15

4. The liquid drop jet head as claimed in
claim 1, wherein the common liquid room has a
configuration of a single wing on a plane level.

20

5. The liquid drop jet head as claimed in
25 claim 4, wherein the supply opening part is provided

at a wall surface side opposite to the wall surface
side to which the liquid room in the common liquid
room is provided, an external side of the wall
surface, or an external side of the liquid room being
5 in a direction of a line of the liquid room.

10 6. The liquid drop jet head as claimed in
claim 1, wherein the common liquid room has a
configuration of dual wings on a plane level.

15

7. The liquid drop jet head as claimed in
claim 6, wherein a wall surface opposite to the side
to which the liquid room is provided in a common
20 liquid room has a substantially arc configuration or
a semicircle configuration in a direction of a line.

25

8. The liquid drop jet head as claimed in
claim 6, wherein the supply opening part is provided
at a wall surface side opposite to the side to which
the liquid room in the common liquid room is provided,
5 an external side of the wall surface, or an external
side of the liquid room being in a direction of a
line of the liquid room.

10

9. The liquid drop jet head as claimed in
claim 1, wherein a plurality of the common liquid
rooms is formed in a direction of a line of the
15 liquid rooms independently.

20 10. The liquid drop jet head as claimed in
claim 4, wherein a plurality of the common liquid
rooms is formed in a direction of a line of the
liquid rooms independently and the respective common
liquid rooms are arranged in parallel.

25

11. The liquid drop jet head as claimed in
claim 4, wherein a plurality of the common liquid
rooms is formed in a direction of a line of the
liquid rooms independently and the respective common
5 liquid rooms are arranged line-symmetrically.

10 12. The liquid drop jet head as claimed in
claim 9, wherein a number of the liquid rooms
connected to one of the common liquid room is in a
range of two or more and thirty-two or less.

15

13. The liquid drop jet head as claimed in
claim 9, wherein the respective common liquid rooms
20 and the liquid rooms have partition walls and a width
of the partition wall between the neighboring common
liquid rooms has a substantially same length as the
width of the partition wall between the neighboring
liquid rooms.

25

14. The liquid drop jet head as claimed in
claim 1, wherein the liquid rooms make a plurality of
lines and the common liquid rooms for the every line
of the liquid rooms are provided independently
5 between the respective lines of the liquid rooms.

10 15. The liquid drop jet head as claimed in
claim 14, wherein the supply opening part being
common for the common liquid rooms for the every line
of the liquid rooms is provided in the common liquid
rooms so that the liquid is supplied.

15

16. The liquid drop jet head as claimed in
20 claim 1, wherein the common liquid room is formed by
anisotropically etching of a silicon substrate.

25

17. The liquid drop jet head as claimed in
claim 16, wherein the common liquid room has a wall
surface at a liquid room side of the common liquid
room, and the wall surface has a plane configuration
5 having an obtuse angle.

10 18. The liquid drop jet head as claimed in
claim 1, wherein the supply opening part is provided
at a surface opposite side to a lid member or a
nozzle board forming a wall surface of the liquid
room.

15

19. The liquid drop jet head as claimed in
20 claim 18, wherein the supply opening part is formed
by a mechanical process.

25

20. The liquid drop jet head as claimed in claim 18, wherein the supply opening part is formed by anisotropically etching.

5

21. The liquid drop jet head as claimed in claim 1, wherein the pressure generating part
10 includes a vibration board forming the wall surface of the liquid room and an electrode facing the pressure generating part so that the vibration board is deformed by an electrostatic force.

15

22. The liquid drop jet head as claimed in claim 1, wherein the pressure generating part
20 includes a vibration board forming the wall surface of the liquid room and an electric machine conversion element deforming the vibration board.

25

23. The liquid drop jet head as claimed in claim 1, wherein the pressure generating part includes an electric thermal conversion element arranged in the liquid room.

5

24. The liquid drop jet head as claimed in claim 1, wherein the liquid drop jet head is used as an ink jet head, for an ink cartridge in which an ink tank supplying the ink to the ink jet head is unified.

15

25. An ink jet recording apparatus, comprising an ink jet head jetting the ink drop, the ink jet head includes

20 a nozzle jetting a liquid drop,
 a liquid room connected to the nozzle,
 a common liquid room connected to the liquid room,

 a supply opening part supplying the liquid to the common liquid room, and
25 a pressure generating part which generates a

pressure pressurizing the liquid provided in the liquid room,

wherein the common liquid room has a configuration in which a width of the common liquid room on a plane level is narrower as a point of the
5 width is more remote from the supply opening part.

10

15

20

25